



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,810	06/22/2001	Sriram Rao	50269-0517	7621
7590 01/26/2005 Hickman Palermo Truong & Becker, LLP 1600 Willow Street San Jose, CA 95125-5106			EXAMINER MAIS, MARK A	
			ART UNIT 2664	PAPER NUMBER

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

09/887,810

Applicant(s)

RAO, SRIRAM

Examiner

Mark A Mais

Art Unit

2664

-- Th MAILING DATE of this communication app ars on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2 IDSs</u> . | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 2664

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDSs) submitted on July 23, 2002 and January 6, 2003 were both filed after the mailing date of the Application on June 22, 2001. The submission is in compliance with the provisions of 37 CFR 1.56 and 1.97. Accordingly, the examiner considered the IDSs.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Viswanadham et al. (USP 6,424,659).

Art Unit: 2664

4. With regard to claims 1 and 16, Viswanadham et al. discloses a method of and a computer-readable medium bearing instructions for performing the method for sending packets in a computer system [**Fig. 2A, interpreted as the combination of switch 20, network management processor (NMP) 10, and route switch (RS) processor 12, col. 2, lines 43-47]** comprising the computer-implemented steps of: communicating from a user level to an operating system level a policy for manipulating packets [**dynamic routing, per-port multicast/broadcast, col. 2, lines 60-65**]; and at the operating system level, modifying the packets based on the policy [**QOS provisioning, col. 3, lines 1-4**].

5. With regard to claims 2 and 17, Viswanadham et al. discloses that the operating system level is below the IP stack [**integrates level 2 (interpreted as data/MAC layer) forwarding of multicast/broadcast/unicast packets, col. 3, lines 54-56**].

6. With regard to claims 3 and 18, Viswanadham et al. discloses that the policy indicates destinations to which messages should be redirected [**packets are directed from a receive ports to a transmit ports (col. 11, lines 47-53) via forwarding block/transmit queue management block, col. 11, lines 28-35; routing information is determined from the packet headers (e.g., col. 21, line 61 to col. 22, line 3)**].

Art Unit: 2664

7. With regard to claims 4 and 19, Viswanadham et al. discloses that the step of modifying the packets includes receiving a packet **[via the receive port, col. 11, lines 47-53]**, replicating the packet based on the policy to create a plurality of replicated packets for a plurality of users interested in receiving the packet **[inherently, the packets are replicated when either a broadcast or multicast command is used in the switch, see also col. 3, lines 54-56]**; and the method further comprises the step of transmitting the replicated packets to the interested users based on the policy **[the forwarding engine (FE) can multicast or broadcast to selected/all ports, col. 24, lines 6-10, see also col. 21, lines 43-45]**.

8. With regard to claims 5 and 20, Viswanadham et al. discloses that a method of, and a computer-readable medium bearing instructions for performing the method for sending packets in a computer system comprising the computer-implemented steps of: communicating from a user level to hardware a policy for manipulating packets **[dynamic routing, per-port multicast/broadcast, col. 2, lines 60-65]**; and in the hardware **[Fig. 10A, hardware block, col. 15, lines 49-51]**, modifying the packets based on the policy **[QOS provisioning, col. 3, lines 1-4]**.

9. With regard to claims 6 and 21, Viswanadham et al. discloses that the hardware is a router **[switch/router 20, which performs layers 2 & 3 packet delivery; see also col. 3, lines 10-14]**.

Art Unit: 2664

10. With regard to claims 7 and 22, Viswanadham et al. discloses the method of and the computer-readable medium bearing instructions for performing the steps of: creating an aggregate message from individual messages that are to be sent using an operating system service; transmitting the aggregate message to an operating system level with a system call; within the operating system level, dividing the aggregate message back into individual messages; and transmitting the individual messages using the operating system service **[individual packets are received via the receive buffers in 64-byte slices with start-of and end-of-frame signaling, col. 7, line 32 to col. 8, line 3; serviced in a time-division-multiplexed manner, col. 7, lines 26-32; it is inherent that groupings of packets can be bigger or smaller than the 64 bytes slices, but the packets must be reconstituted in the correct order for unicast/multicast/broadcast to the respective ports via the FE, *see also* col. 24, lines 6-10 and col. 21, lines 43-45].**

11. With regard to claims 8 and 23, Viswanadham et al. discloses that the individual messages are packets **[64 byte slices, col. 7, lines 26-27].**

12. With regard to claims 9 and 24, Viswanadham et al. discloses that the aggregate message includes a policy **[dynamic routing, per-port multicast/broadcast, col. 2, lines 60-65].**

Art Unit: 2664

13. With regard to claims 10 and 25, Viswanadham et al. discloses that the policy indicates destinations to which messages should be redirected **[packets are directed from a receive ports to a transmit ports (col. 11, lines 47-53) via forwarding block/transmit queue management block, col. 11, lines 28-35]**.

14. With regard to claims 11 and 26, Viswanadham et al. discloses that the policy includes video-to-message information **[inherently, the packets transmitted can be video, or any other high QOS packets, with information in the packet header indicating routing information (e.g., col. 21, line 61 to col. 22, line 3); see also the functions performed by the auto forwarding block (AFB), col. 15, lines 22-30]**.

15. With regard to claims 12 and 27, Viswanadham et al. discloses that the policy includes a time stamp that is a range of time indicating when the individual messages should be transmitted **[the L3 check block performs a time to live (TTL) check to make sure that the packet can be sent, and, if not, generates an error flag, col. 16, lines 30-42; in addition, the packets are processed according to QOS constraints (policy-based QOS, col. 3, lines 1-4) which determine priority queuing and packet latency]**.

Art Unit: 2664

16. With regard to claims 13 and 28, Viswanadham et al. discloses that the policy includes time stamps for transmitting the individual messages according to the time stamps associated with the individual messages **[the L3 check block performs a time to live (TTL) check to make sure that the packet can be sent, and, if not, generates an error flag, col. 16, lines 30-42; in addition, the packets are processed according to QOS constraints (policy-based QOS, col. 3, lines 1-4) which determine priority queuing and packet latency]**.

17. With regard to claims 14 and 29, Viswanadham et al. discloses that the time stamps are sequence numbers **[inherently, time stamps are sequence numbers—especially when only a finite amount of bytes are allocated to the timestamp/sequence number]**.

18. With regard to claims 15 and 30, Viswanadham et al. discloses that the time stamps are relative virtual time delays with respect to the first message to be transmitted **[the 2-bit timestamps/counters CurrTime and AgeTime where AgeTime is the timestamp that ‘ages’ the packets and the CurrTime is the time which is reset to zero, col. 18, lines 45-52; these are used to maintain the age table entries, col. 17, lines 15-25]**.

### ***Conclusion***

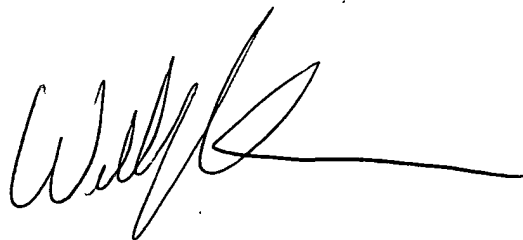
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.



20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 14, 2004

A handwritten signature in black ink, appearing to read 'Wellington Chin', followed by a long horizontal line extending to the right.